

Details of specifications of equipments to be purchased by FARMER under the project funded by DST/ICAR

1. SPECIFICATIONS FOR A VERTICAL AUTOCLAVE

- 175 liters capacity vertical double wall design autoclave for research use.
- Steel wire Mess Basket of size - Diameter – 38cm x Height – 100 cm with suitable to carry
- Single stainless steel chamber type for water and steam.
- Pressure range 15 PSI; temperature range- 121-125 °C. Safety cut off 20 PSI
- Lid fitted pressure gauge, safety spring loaded pressure valve and steam release valve.
- Electric operated; 200-240 V/ 15A/ 50 Hz.
- Temperature and pressure controls with digital display.
- Auto cut off at cycle completion.
- Foot lifting arrangement for the autoclave lid.
- The 2 year warranty.
- Any deviation in specification will be considered with the approval of technical committee.

2. SPECIFICATIONS FOR BENCHTOP PRECISION pH METER WITH PROBES

- Bench top pH meter with pH and Temperature probes
- pH range - 0-14
- Temperature range- 0-100°C Temperature
- Bigger Informative display with bright backlight
- 5 point calibration of pH meter with minimum 3 buffer solution required.
- Store and recall up to 500 sets of data or send data to a PC or printer
- Visual stability indicator to inform when measurements have stabilized
- Should include electrode stand and 100/240 VAC power adapter, probes, gel filled electrode.
- CE compliance
- The 2 year warranty.
- Any deviation in specification will be considered with the approval of technical committee.

3. SPECIFICATIONS FOR PRECISION EC METER/TDS KIT

- Easy to use precision EC meter/TDS Kit for laboratory use.
- Up to three/five point calibration with auto-buffer recognition for quick calibrations and response. Easy pushbutton single point calibration—no screwdrivers required. Features self-adjusting TDS factor from 0.40 to 1.0.
- Single-junction pH electrode to protect against breakage.
- pH range 0 – 14.
- TDS range 0 – 2000.
- Suitable adaptor
- Automatic temperature compensation to ensure accurate readings, a hold function to lock in a measured value.
- Should include- tester; conductivity solution 1500 uS/cm; electrode storage solution.
- 2 years warranty.
- Any deviation in specification will be considered with the approval of technical committee.

4. SPECIFICATIONS FOR PRECISION ANALYTICAL BALANCE

- Analytical balance of capacity 220g.
- Pan Size 80 to 100 mm
- External calibration and touch screen.
- High contrast LCD Display with large numbers & clear symbols to provide maximum readability, repeatability 1mg regardless of lighting conditions
- Quick access to all built-in applications & the adjustment menu.
- 2 years warranty.
- Any deviation in specification will be considered with the approval of technical committee.

5. Specification for Advance Research Stereobinocular Microscope With photo micrographic attachment

- Optical System - Stereomicroscope with Greenough Optical System and fully apochromatic optical system. Focussing column with 500 mm or better
- Resolution - Upto500 lp/mm or betterwith 12 mm depth of field and 37 mm or better object field.
- Zoom Ratio - 9:1 or better with total Magnification range of 6.1X to 55X or better.

- Observation tube - Binocular tube inclined at 35 degrees or lower with interpupillary distance adjustment range from 50 –75 mm or better, Integrated high resolution camera of 10 MP with live imaging capability of 31 fps or better. Should have USB, network and HDMI connectivity
- Eyepiece - Widefield paired eyepiece of 10x having F.O.V 23 mm or better with Diopter adjustment for both eyes
- Objective - Apochromatic objective of 1x with working distance 120 mm or higher
- Transmitted Illumination - Transmitted light LED stage with Rottermann Contrast, brightfield and one sided darkfield
- Reflected light - Reflected multiple LED's based ring light illumination.
- HD Monitor
- Software - The software should be able to carry out measurements of length and circumference on live image.
- Essential - Microscope, camera and software should be from same manufacturer for better synchronization.
- Important Conditions:
 - Only those companies which manufacture stereo zoom microscopes should quote directly and not through their agents.
 - Companies quoting should indicate their client list and also make provision to demonstrate their product.
 - Companies quoting just word by word our specifications will be disqualified.
- The 2 year warranty.
- Any deviation in specification will be considered with the approval of technical committee.

6. Technical Specification for Laminar airflow

- Laminar Cabinets Inner Chamber & Outer Chamber made of stainless steel high efficiency particulate air filters, to achieve the air purification upto 0.3 Microns in working area.
- Working area 4 ft x 2 ft x 2 ft
- Blower fitted with ¼ HP Motor, with RPM 1200 to 1400.
- Pre-filters made of high grade nylon Net fixed in S.S. frame for first Stage air purification, through blower system.

- Closed Inner Chamber fitted with HEPA having very accurate performance rate of air filtration, rated 99.99%, resulting in ceasing all air bore molecule of particle up to 0.3 micron in working Area of Laminar Bench.
- Working area of Laminar Airflow Cabinets illuminated by fluorescent light; cabinets operated at 230V. Single Phase 50Hz. AC Supply.
- Fitted with UV Germicidal lamp for sterilization.
- Fitted with Acrylic Front Door sliding type fitted with Manometer for Measurement of HEPA Filters Choking system.
- Fitted with Cock for Gas Connection.
- The 2 year warranty.
- Any deviation in specification will be considered with the approval of technical committee.